

CLIMATOLOGICAL DATA FOR OCTOBER, 1913.

DISTRICT NO. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

October in the Colorado Basin was free from severe storms. It is true that several moderately strong depressions crossed the extreme northern part of the district, but the attending conditions lacked the severity common to such depressions at this time of year. In the southern half of the district the depressions, which soon disappeared, were ill-defined and too weak to interrupt materially the prevailing fine weather. As a result of the preponderance of high-pressure areas in the northern and central parts of the district, the month was somewhat colder and much drier than the normal. The matter of deficient precipitation was not unfavorable to interests in the central and northern parts of the district, but in the southern part, notably in Arizona, the need of rain was felt, the precipitation having been deficient during the last seven months in that State. For the period April to October, inclusive, the total precipitation on the different watersheds was as follows: Little Colorado, 7.71, - 2.13; Gila, 5.90, - 2.14; Mimbres, 6.65, - 1.76; and the Colorado proper, 4.18 inches, - 1.40 inches. A scarcity of water for stock continues, and the ranges are in poor condition. As an illustration of the heavy drain made on the stored supply of water, it is noted that the contents of the Roosevelt Reservoir on November 1 was 147,926 acre-feet, as against 428,490 acre-feet on the corresponding date last year.

TEMPERATURE.

The monthly mean for the stations reporting was 53.4° , or 1.3° below the normal. The mean for October, 1912, was 51.7° . The highest monthly mean was 73.6° at Mohawk, Ariz., and the lowest, 31.8° , at Willow Creek Cabin, Wyo. The first 10 or 12 days were cooler than the normal, the deficiencies being marked on the 6th and 7th. In Arizona the 16th and 17th were somewhat cooler than the normal, but the rest of the second and third decades was appreciably warmer than the normal. In the central and northern parts of the district temperatures fluctuated, there being a number of short warm and cold periods during the last two decades. The highest temperatures occurred principally at the beginning of the month in the northern and central parts of the district and on the 12th and 13th in the southern part. Temperatures of 90° or higher occurred at one station in western New Mexico and at 37 in Arizona. The lowest temperatures occurred principally on the 26th, 27th, or 28th, although at a number of stations in eastern Utah, southeastern Nevada, and at the majority of those in Arizona the lowest occurred on the 6th or 7th. Freezing temperature occurred at all stations except two each in Utah and Nevada and about two-thirds of those in Arizona. Zero temperatures occurred at three stations in Colorado. The highest temperature, 101° , occurred at Buckeye and Maricopa, Ariz.,

on the 12th and 13th respectively, and the lowest, -8° , at Dillon, Colo., on the 26th.

Details of temperature are summarized in the following table:

Areas of States in district No. 9.	Temperature.					
	Mean.	De- part- ure from nor- mal.	High- est.	Station.	Low- est.	Station.
Western Wyoming.....	35.8	-3.3	75	At 2 stations.	2	Wamsutter.
Western Colorado.....	41.7	-2.3	81	Delta.....	-8	Dillon.
Eastern Utah.....	47.6	-1.5	88	St. George.....	5	Scofield.
Western New Mexico.....	52.8	-0.6	90	Deming.....	12	At 2 stations.
Arizona.....	62.0	-1.1	101	At 2 stations.	14	Do.
Southeastern Nevada.....	58.1	+4.2	91	Logan.....	22	Caliente.

PRECIPITATION.

The average for the stations reporting was 0.56 inch, or 0.43 inch less than the normal. The average for October, 1912, was 2.10 inches. The rainfall in western Wyoming, western Colorado, and eastern Utah occurred principally during the first decade, and in localities in the Colorado and Wyoming areas during the last decade. In the southern areas the wet periods were the first three days and the last day of the month. Rainfalls of an inch or more in 24 hours occurred one time in eastern Utah, twice in Arizona, and four times in western New Mexico. The greatest monthly amount was 2.89 inches at Alpine, Ariz., while none occurred at two stations in southeastern Nevada, 3 each in eastern Utah and western New Mexico, and 21 in Arizona. Monthly snowfalls of 10 inches or more occurred at 8 stations in western Colorado. The maximum monthly fall was 28 inches at Spruce Lodge, Colo. The average number of days with 0.01 inch or more precipitation was 6 each in western Wyoming and western Colorado, 2 in western New Mexico, and 1 each in eastern Utah and Arizona, and no day in southeastern Nevada. For the district as a whole the average was 2 days.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

Watershed.

Green.	Grand.	San Juan.	Little Colorado.	Gila.	Mimbres.	Colorado proper.							
Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.							
0.73	-0.21	0.78	-0.64	1.36	+0.42	1.06	-0.10	0.33	-0.47	0.84	-0.60	0.21	-0.58

MISCELLANEOUS.

The average amounts of sunshine in percentages, with departures from the normal, were: Grand Junction, 75, -1; Durango, 79, -5; Phoenix, 92, +4; and Yuma, 96, +5.

The relative humidity reported was: Grand Junction, 54, +6; Durango, 50, -6; Phoenix, 31, -6; and Yuma, 43, -1.

RIVERS.

The rivers were at a low stage throughout the month.

ERRATA.

The following corrections should be made in the data furnished for District No. 9, Colorado Valley:

JANUARY, 1913

Table 1.—Climatological data. Grand Junction, Colo., greatest daily range of temperature should be 41° instead of 39° .

Table 3.—Daily maximum and minimum temperatures. Grand Junction, Colo., maximum temperature on the 15th should be 43° instead of 41° ; minimum temperature on the 9th should be -9° instead of -8° .

FEBRUARY, 1913.

Table 1.—Climatological data. Flagstaff, Ariz., total precipitation should be 2.78 inches instead of 2.76 inches; departure from the normal should be -0.50 inch instead of -0.52 inch; the greatest 24-hour

precipitation should be 0.79 inch instead of 0.60 inch; Montrose, Colo., the number of partly cloudy days should be 6 instead of 5; number of cloudy days should be 9 instead of 10; Yuma, Ariz., the monthly mean temperature should be 56.6° instead of 56.8° ; the departure from the normal should be -2.2° instead of -2.4° .

Table 2.—Daily precipitation. Flagstaff, Ariz., the total monthly precipitation should be 2.78 inches instead of 2.76 inches.

Table 3.—Daily maximum and minimum temperatures. Yuma, Ariz., the mean maximum temperature should be 69.6° instead of 70.0° .

MARCH, 1913.

Table 1.—Climatological data. Dillon, Colo., the number of clear days should be 20 instead of 19; the number of cloudy days should be 9 instead of 10.

JULY, 1913.

Table 1.—Climatological data. Mancos, Colo., the monthly mean temperature should be 66.6° instead of 66.4° ; the departure from the normal should be $\pm 0^{\circ}$ instead of -0.2° .

AUGUST, 1913.

Table 1.—Climatological data. Gunnison, Colo., the monthly mean temperature should be 61.5° instead of 66.5° ; the departure from the normal should be -2.1° instead of -7.1° ; Hayden, Colo., the monthly mean temperature should be 67.7° instead of 67.8° .

SEPTEMBER, 1913.

Table 1.—Climatological data. Flagstaff, Ariz., the greatest 24-hour precipitation should be 0.49 inch instead of 0.47 inch.

TABLE 1.—Climatological data for October, 1913. District No. 9, Colorado Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Wyoming.</i>																				
Big Piney.....	Lincoln.....	6,800	11	33.1	62	1	6	21	42	0.32	0.15	2.1	4	15	0	16	n.	Ira Dodge.
Daniel.....	do.....	6,740	14	J. M. Van Dervort.	
Eden.....	Sweetwater.....	6,577	4	39.6 ^d	-3.3	75	2	5 ^b	26	39 ^b	1.08	+ 0.27	0.82	7.0	4	13	11	7	w.	Eden Val. L. & I. Co.
Green River.....	do.....	6,083	8	5	28	35	Wm. Hutton.	
Pinedale.....	Fremont.....	7,167	7	1	2	25	43	0.68	0.52	4.7	6	18	2	11	U. S. Forest Service.
Wamsutter.....	Sweetwater.....	6,702	38.8	75	1	2	23	46 ^b	0.67	0.20	9.3	8	71	2 ^b	12 ^b	T. C. Sherman.	
Willow Creek Cabin.....	Fremont.....	7,500	4	31.8 ^b	-62 ^b	2	4 ^b	23	46 ^b	0.67	U. S. Forest Service.	
<i>Colorado.</i>																				
Ashcroft.....	Pitkin.....	9,483	11	34.4	-3.4	68	2	-1	26	46	1.34	-0.20	0.32	11.0	12	Dan McArthur.	
Aspen.....	do.....	7,931	2	37.2	71	2	14	30	44	1.34	0.48	12.0	5	11	11	9	U. S. Forest Service.	
Blue Valley Ranch.....	Grand.....	7,525	0.70	3.0	7	20 ^b	1 ^b	L. R. Hubbard.	
Cascade.....	San Juan.....	8,900	6	15	46.2	-3.2	75	1	15	26	39	0.38	-0.73	0.22	0	4	16	11	The Western Colo. Power Co.	
Cedaredge.....	Delta.....	6,175	4	34.0	65	2 ^b	5	11	50	0.52	0.30	3.0	3	8	10	13	Harry A. Cobbett.	
Cochetopa.....	Saguache.....	9,088	4	20	46.0 ^d	-1.7	74 ^d	1	15 ^d	26	41 ^d	0.71	-0.61	0.23	2.0	5	20 ^d	4 ^d	Miss Bessie McDonough.	
Colbran.....	Mesa.....	6,000	3	32.2	66	2	-8	26	51	0.65	0.56	27.5	11	9	8	14	A. A. Wood.	
Columbine.....	Routt.....	8,766	3	32.2	70	1	19	27	42	1.59	-0.16	0.86	8.0	3	15	8	8	Mrs. M. A. Caron.	
Columbine Ranch.....	Delta.....	6,925	3	31.9	72	1 ^b	24	31	38	1.40	0.35	29	2	0	0	0	George W. Wade.	
Cortez.....	Montezuma.....	6,100	2	48.0	69	1	11	26	35	0.36	0.22	0	3	17	7	7	W. G. Clucas.	
Crawford (near).....	Montrose.....	6,600	3	41.4	.....	69	1	11	26	35	0.36	.....	0.28	7.0	9	10	9	C. W. Roe.
Crested Butte.....	Gunnison.....	8,867	3	34.0	.....	65	2 ^b	5	11	50	1.15	.....	0.30	0	0	23	6	Charles L. Ross.
Delta.....	Delta.....	4,985	23	48.8	-1.1	81	1	17	29	49	T.	-0.80	T.	0	0	23	6	E. M. Getts.		
Dillon.....	Summit.....	8,800	3	32.2	.....	66	2	-8	26	51	0.65	.....	0.35	7.0	8	15	12	Mrs. Nannie B. Strong.
Durango.....	La Plata.....	6,534	18	45.9	-3.0	70	1	19	27	42	1.59	-0.16	0.11	2.0	3	11	13	The Western Colo. Power Co.		
Eureka.....	San Juan.....	10,000	6	31.9	.....	68	2	-6	29	48	0.73	.....	0.30	7.0	9	9	4	L. D. C. Gaskill.
Frazer.....	Grand.....	8,566	4	31.9	.....	70	2	11	26	47	0.04	-1.15	0.02	0	3	19	7	J. B. Wilseas.	
Fruitado.....	Mesa.....	4,590	14	47.6	-2.0	79	1	16	26	47	0.13	.....	0.07	1.0	4	23	4	A. F. Terrill.	
Glade Park.....	do.....	7,000	2	34.0	.....	70	2	11	26	47	0.04	.....	0.07	0	0	23	4	The Western Colo. Power Co.
Gladstone.....	San Juan.....	10,400	6	31.9	.....	70	2	11	26	47	0.13	.....	0.07	0	0	23	4	E. A. O'Neil.
Glenwood Springs (near).....	Garfield.....	5,833	15	45.6	-1.3	78	1 ^b	14	26	48	0.65	.....	0.42	3.0	4	25	2	U. S. Weather Bureau.	
Grand Junction.....	Mesa.....	4,602	23	50.2	-3.1	75	1	15	26	35	0.22	0.69	0.07	0	6	15	14	Mrs. Belle Kaufman.	
Grandlake.....	Grand.....	8,153	5	31.9	.....	71	1 ^b	12	27	52	0.13	.....	0.71	17.0	8	10	16	David Evans.
Grand Valley.....	Garfield.....	5,089	21	47.3	-2.5	80	1	14	29	47	0.36	-0.97	0.09	T.	8	10	11	Clarence Adams.		
Gunnison.....	Gunnison.....	7,670	20	39.7	-1.5	72	26	6	31	59	0.24	-0.40	0.15	T.	2	20	11	A. W. Friedrich.		
Hayden.....	Routt.....	6,337	40.9	34.0	74	1 ^b	11	26	40	40	1.58	.....	0.40	4.0	9	12	6	G. F. Snyder.	
Hesperus (near).....	La Plata.....	7,610	1	34.0	.....	74	1	11	26	40	1.54	.....	0.67	T.	3	20	5	Lawrence J. Finch.
Horsefly.....	Monrose.....	8,700	3	34.0	.....	75	1	11	26	40	1.54	.....	0.44	4.0	5	19	5	Mrs. Amanda E. Foley.
Ironton.....	Ouray.....	10,000	3	38.3	.....	64	24	11	10 ^b	43	1.14	.....	0.40	9.8	5	15	11	J. F. Maurer.
Lake City.....	Hinsdale.....	8,686	8	38.3	.....	64	24	11	10 ^b	43	0.68	.....	0.22	6.0	8	17	9	A. G. Wallihan.
Lay.....	Moffat.....	6,190	19	40.9	-2.7	74	1	8	26	43	0.59	-0.39	0.27	4.0	4	16	6	Miss Gertrude Kickner.		
Mancos.....	Montezuma.....	6,960	14	39.0	.....	70	2	9	26	44	1.60	.....	0.40	14.4	6	23	3	F. E. Morse.
Marble.....	Gunnison.....	7,951	4	39.0	70	2	9	26	44	1.60	0.31	-0.77	0.16	4.0	2	17	10	Wm. L. Williams.
Marshall Pass.....	Saguache.....	10,846	10	34.0	.....	70	2	11	26	44	1.60	.....	0.31	-0.77	T. Baker.	.....	.....	.....
Meeker (near).....	Rio Blanca.....	6,182	21	41.0	-2.1	72	1	10	26	45	1.73	+ 0.27	0.95	3.4	4	13	10	W. w.		
Montrose.....	Montrose.....	5,811	24	47.0	-1.3	75	1	15	26	43	0.33	-0.64	0.21	4.0	3	19	10	U. S. Reclamation Service.		
Nast.....	Pitkin.....	7,953	3	35.0	.....	69	2	6	26 ^b	52	1.03	.....	0.30	13.4	5	15	9	Arthur Hanthorn.
Pagosa Springs.....	Archuleta.....	7,108	6	40.2	.....	71	12	8	27	52	0.51	.....	0.98	T.	4	19	10	E. T. Walker.
Palisades.....	Mesa.....	4,729	2	49.4	.....	80	1	21	27	45	0.29	.....	0.15	0	2	22	7	E. P. Updegraff.
Paonia.....	Pitkin.....	5,694	18	48.4	-2.7	77	1	21	26 ^b	40	0.83	-0.53	0.55	2.0	4	12	5	Mrs. Maggie Cannmann.		
Redcliff.....	Gunnison.....	9,500	4	38.3	.....	70	2	11	26	44	0.90	.....	0.35	2.0	3	19	7	Dorothea Greiner.
Redvale.....	Eagle.....	8,695	20	41.6	.....	64	13	3	18	46	0.74	.....	0.37	T.	3	17	6	Dr. E. S. Foster.
River Portal.....	Dolores.....	8,300	11	34.8	.....	63	24	9	26	45	1.18	.....	0.26	2.0	6	12	9	Clinton B. Smith.
Sapinero (near).....	Montrose.....	6,570	7	38.3	-1.7	64	12	12	26	43	0.98	-0.57	0.30	8.0	8	20	9	Herman Eiche.		
Shoshone.....	Gunnison.....	8,125	10	38.3	.....	63	24	9	26	45	1.18	.....	0.27	2.0	6	12	9	W. F. Irving.
Silverton (near).....	Garfield.....	6,110	3	34.8	.....	63	24	9	26	45	2.85	.....	0.45	28.0	13	12	3	Central Colorado Power Co.
Spruce Lodge.....	San Juan.....	9,400	6	34.8	.....	63	24	9	26	45	2.85	+ 0.35	0.58	5.3	7	15	8	The Western Colo. Power Co.	
Steamboat Springs.....	Routt.....	6,683	10	38.3	-3.9	75	2	10	26	49	1.56	.....	0.80	0	6	17	8	Herbert B. Gee.	
Tacoma.....	La Plata.....	7,300	7	34.8	.....	66	2	11	26	49	1.03	.....	0.50	5.8	6	22	3	The Western Colo. Power Co.
Telluride.....	San Miguel.....	8,758	1	39.1	.....	68	12	10	11 ^b	49	1.75	.....	0.77	1.0	7	18	6	George R. Painter.
Terminal Dam.....	La Plata.....	8,300	6	34.0	.....	63	24	9	26	45	1.10	.....	0.40	T.	6	19 ^c	8 ^c	Wm. A. Charls.
Yampa (near).....	Routt.....	8,000	4	34.0	.....	63	24	9	26	45	1.10	.....	0.00	0	0	13	8	10.
<i>Utah.</i>																			Herbert H. Redd.	
Bluff.....	San Juan.....	4,200	1	34.0	.....	63	24	9	26	45	0.50	.....	0.35	2	2	2	0	Oscar Wilkins.
Bonita.....	Wasatch.....	6,750	1	34.0	.....	63	24	9	26	45	0.11	.....	0.06	2	2	2	0	J. H. Lauritzen.
Canaan.....	Washington.....	0	0	.....	.....	.....	.....	.....	.....	.....	0.11	.....	0.25	0	2	22	8	Miss Fay Jeffs.
Castle Dale.....	Emery.....	5,500	14	41.8	-6.0	73	1 ^b	11	26	45	0.43	-0.37	0.25	0	2	22	8	Homer D. Ford.		
Dragon.....	Uinta.....	6,000	6	34.6	.....	72	1	13	26	43	0.49	.....	0.25	1.0	5	21	5	Matthew De Moisey, Jr.
Duchesne.....	Wasatch.....	5,500	6	45.2	.....	72	13	11	29	40	0.31	.....	0.27	T				

TABLE 1.—Climatological data for October, 1913. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky	Prevailing wind direction.	Observers.				
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
Utah—Continued.																						
San Rafael.	Emery	4,250	1	56.5	- 2.7	88	12	26	6	58	0.00	- 0.64	0.00	0	0	21	7	3	s.	Jos. J. Nouguier.		
St. George.	Washington	2,880	26	43.6	+ 2.7	66	1	5	27	51	1.30	0.50	0.50	2.5	4	22	0	9	s.	Wm. Goodspeed.		
Scofield.	Carbon	7,625	4	36.8																B. Newren.		
Springdale.	Washington	3,500	5																	Hattie F. Wood.		
Strawberry Tunnel E.	Wasatch	7,650	1																	U. S. Reclamation Service.		
Teasdale.	Wayne	7,000	4	45.9		80	4†	15	7	45†	0.00		0.00	0	0	17	12	2	w.	Henry Cullum.		
Thompson.	Grand	5,150	2	48.8		79	1	16	20	40	T.		T.	0	0	22	9	0	sw.	Mrs. A. M. Starmont.		
Tropic.	Garfield	7,000	16	46.7	- 1.0	75	25	18	8	43	0.11	- 0.87	0.11	0	1	17	2	2	nw.	E. P. Bolton.		
Troutcreek Ranger.	Uinta	9,200	2																	Forest Supervisor.		
Vernal.	do.	5,050	16	48.3	+ 1.3	86	1	22	11†	56	T.	- 1.02	T.	T.	0	15	8	5		H. E. Dillman.		
Victor.	Emery	5,250	1										0.10		1					F. F. Noyes.		
White Rocks.	Uinta	6,200	12										0.04		2	21	3	7		E. C. Sims.		
Woodside.	Emery	4,645	12	45.4		84	1	14	28	52	T.		T.	0	0					D. P. Adams.		
New Mexico.																						
Alma.	Socorro	4,800	15	55.4	- 0.6	85	13	20	27	55	1.26	- 0.46	0.72	0	3	17	11	3	s.	Max A. Balke.		
Aragon.	do.	6	48.4		74	1†	12	27	56	0.67		0.55	0	0	2	25	5	1	sw.	John R. Milligan.		
Aztec.	San Juan	5,590	13																	Dr. T. J. West.		
Berger's Ranch.	McKinley	8,000	1																	Herman Berger.		
Blackbrook.	do.	6,500	4																	Patrick Des Georges.		
Bloomfield.	San Juan	5,500	18	49.8	- 1.7	79	1	18	27	45	1.42	+ 0.55	0.75	0	3	15	16	0	sw.	Fred LeClerc.		
Cambray.	Luna	4,215	14										0.00	- 0.65	0.00	0	0	28	1	2	Agent Southern Pacific R. R.	
Cliff.	Grant	4,470	13	57.8	- 0.3	88	5	16	27	62	1.17	+ 0.04	1.07	0	2					W. C. Belden.		
Columbus.	Luna	4,054	4										0.11		0	1	24	3	4	Agent E. P. & S. W. R. R.		
Crystal.	San Juan	7,400																	J. A. Molohon.			
Deming.	Luna	4,333	36	61.1	+ 1.1	90	13	26	25	44	0.30	0.41	0.22	0	2	20	2	3	w.	E. O. Green.		
Dulee.	Rio Arriba	6,767	16	43.4	- 1.1	73	12	12	27	50	1.81	+ 0.33	1.65	0	2	19	7	5	sw.	U. S. General Hospital.		
Fort Bayard.	Grant	6,152	44	56.0	- 0.7	73	13	25	27	42	0.34	- 0.80	0.23	0	5	26	4	1	w.	C. J. Collyer.		
Fruitland.	San Juan	4,800	16	50.6	- 0.4	79	1	22	27	44	1.87	+ 1.22	1.10	0	4	22	8	1	sw.	Agent Southern Pacific R. R.		
Gage.	Luna	4,450	15	61.0		85	14	31	26	38	0.00	- 0.52	0.00	0	0	26	5	0	w.	U. S. Forest Service.		
Gila Planting Station.	Grant	6,475	2	55.5		79	13	26	27	58	0.43		0.35	0	3	22	5	4	w.	Victor Culberson.		
G. O. S. Ranch.	do.	8,000	1	49.3		73	13	16	26	50	1.19		0.66	0	4	21	4	1	sw.	Agent E. P. & S. W. R. R.		
Hachita.	Rio Arriba	4,504	4			72	1	14	26	49	1.40		0.10	0	1	27	11	0	sw.	Mrs. O. L. Wingate.		
Haynes.	Luna	6,600	2	44.6													31	8	2	sw.	Agent E. P. & S. W. R. R.	
Hermances.	Rio Arriba	4,451	4														25	3	3	w.	J. H. McClure.	
Lordsburg.	Grant	4,246	32	58.8	- 2.4	88	14	26	27	48	0.30	- 0.48	0.30	0	1	29	1	1	sw.	C. B. Martin.		
Luna.	do.	7,300	13	46.2	+ 0.6	73	8	13	27	57	0.09	- 0.24	0.62	0	2	15	16	0	s.	Charles Dennis.		
Mimbres.	Grant	5,007	8										0.00	0	0	24	5	2	sw.	O. L. Scott.		
Pinos Altos (near).	do.	7,253	2										1.89		1	21	10	0	w.	Agent E. P. & S. W. R. R.		
Pratt.	do.	4,415	4										0.08	0	1	22	6	3	sw.	C. F. Spader.		
Putnam.	San Juan	6,200	1										0.36		0	2	25	4	2		Robt. H. Woods.	
Redrock.	Grant	4,180	8										0.26		0	1	22	1	8	sw.	Agent E. P. & S. W. R. R.	
Rodeo.	do.	4,118	4										0.38	0	4	26	4	1	w.	E. M. Brumback.		
Silver City.	do.	5,937	2	53.6		77	12	24	27	40	0.55											
Arizona.																						
Allaires Ranch.	Cochise	4,184	17										0.16	- 0.25	0.00	0	1	24	5	2	rw.	Thomas Allaire.
Alpine.	Apache	8,500	4	45.2		77	22	19	19	57	2.89		1.50	0	3	21	7	3	s.	U. S. Forest Service.		
Ashfork.	Yavapai	5,229	3										0.00		0	0	30	1	0		Do.	
Aztec.	Yuma	492	15	72.4	- 3.6	96	5†	41	7	48	0.00	- 0.24	0.00	0	0	30	0	1	sw.	Agent Southern Pacific Ry.		
Benson.	Cochise	3,523	32	63.8	- 1.8	97	11	32	28	56	0.00	- 0.69	0.00	0	0	25	1	5	w.	Operator E. P. & S. W. R. R.		
Bernardino.	do.	4,493	1										1.25		0.80	0	2	14	15	2	sw.	Agent E. P. & S. W. R. R.
Bisbee.	do.	5,350	23										0.00	- 1.15	0.00	0	0	29	1	1		Mary A. Jones.
Blue.	Greenlee	6,500	6										1.15		0.73	0	2	17	9	5	s.	A. H. Jolley.
Bonita.	Graham	4,916	39										0.00	- 0.81	0.00	0	0	21	10	0	w.	Agent Southern Pacific Ry.
Bowie.	Cochise	3,736	37	67.2	+ 2.8	96	2	39	19	45	T.		0.66	T.	0	0	19	8	4	w.	H. E. Kell.	
Buckeye.	Maricopa	980	21	68.6	- 0.3	101	12	38	7	56	0.19	- 0.30	0.19	0	1	30	1	0	w.	Robert A. Rodgers.		
Canille.	Santa Cruz	5,225	4										0.00	- 0.32	0.20	0	3	16	15	0	sw.	Agent Southern Pacific Ry.
Casa Grande.	Pinal	1,396	32										0.01	- 0.33	0.01	0	1	16	12	3	e.	Frank Pinkley.
Casa Grande Ruin.	do.	1,422	5	68.6		98	12	39	7	50	T.		T.	0	0	25	6	0	w.	John B. Lamfers.		
Cavecreek (near).	Maricopa	1,452	6	67.0		97	12	44	7	41	0.28		0.28	0	0	24	5	2	sw.	F. V. N. Dana.		
Chandler.	do.	2,123	18	68.2	- 1.2	99	11	42	6†	48	0.06	- 0.48	0.06	0	1	29	2	0	sw.	Rev. L. Ostermann, O. F. M.		
Chilars Mill.	Apache	8,090	5										0.00	- 0.85	0.05	0	3	13	10	8	sw.	Hiram R. Chilars.
Clifton.	Graham	8,000	6	51.9		68	13†	35	6†	27	0.22		0.11	0	0	3	11	14	6	s.	Arizona & N. Mex. Ry. Co.	
Cline.	Greenlee	3,584	23	68.5		93	13	39	27	38	0.10	- 0.98	0.10	0	1	28	1	2	sw.	W. M. Clanton.		
Cochise.	Gila	2,300	13	64.4	- 0.9	94	12	30	29	53	0.89	- 0.02	0.85	0	0	2	18	13	0	sw.	Experiment Station Farm.	
Cochise.	Yavapai	4,219	15	62.0	- 0.8	89	13†	30	27	50	0.00	- 0.47	0.00	0	0	21	8	2	w.	M. J. Nolan.		
Columbia.	Yavapai	1,900	13	69.0	- 2.1	94	12	47	6	33	0.75	- 0.14	0.50	0	0	3	29	2	0	sw.	N. F. Girdner.	
Cornville.	do.	3,300	1	58.8		39	11†	30	7†	50	0.00		0.00	0	0	27	4	5	w.	Agent E. P. & S. W. R. R.		
Courtland.	Cochise	4,543	4										0.00		0	0	23	3	5	w.	Do.	
Don Luis.	do.	5,025	1										0.28		0.28	0	1	25	6	0	w.	Neill Erickson.
Dos Cabezos.	do.	5,250	5	56.1		52	2	28	27	39	0.00		0.00	0	0	25	6	0	w.	Dr. F. T. Wright.		
Douglas.	do.	5,930	10	64.6	+ 0.8	95																

TABLE 1.—*Climatological data for October, 1913. District No. 9—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
Arizona—Continued.																				
Keams Canyon	Navajo.	6,600	9	63.5	+ 0.5	89	13†	33	6†	48	T.	- 0.74	T.	0	0	29	1	s.	Fred A. Bartram.	
Kingman	Mohave.	3,326	10	49.2	—	72	15†	20	27	48	1.01	- 0.32	0.42	0	3	26	0	sw.	Agent A. T. & S. F. Ry.	
Lakeside	Navajo.	6,500	15	49.2	—	72	15†	20	27	48	0.00	—	0.00	0	0	26	0	sw.	Jesse H. Rogers.	
Lewis Springs	Cochise.	4,029	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Agent E. P. & S. W. R. R.	
Lowell Observatory	Cochise.	7,180	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Vesto M. Slipher.	
McNeal	Cochise.	4,150	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	George J. Jones.	
Maricopa	Pinal.	1,186	37	70.0	- 1.9	101	12	39	6	56	0.10	- 0.39	0.10	0	1	26	3	sw.	Agent Southern Pacific Ry.	
Marinette	Maricopa.	1,150	1	68.0	—	99	23	40	7†	53	0.00	—	0.00	0	0	23	5	w.	Theodore Katzenstein.	
Moccasin	Mohave.	4,500	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	J. G. Maxwell.	
Mohawk	Yuma.	538	13	73.6†	- 2.8	98	13†	—	—	—	0.64	+ 0.47	0.64	0	1	25	5	e.	Agent Southern Pacific Ry.	
Naco	Cochise.	4,579	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Agent E. P. & S. W. R. R.	
Natural Bridge	Gila.	4,990	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	D. G. Goodfellow.	
Nutrioso	Apache.	8,000	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	U. S. Forest Service.	
Oracle	Pinal.	4,503	19	64.4	+ 1.4	85	14	44	5	33	0.02	- 0.78	0.02	0	1	22	5	w.	J. W. Lawson.	
Osborn	Cochise.	4,676	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Agent E. P. & S. W. R. R.	
Paradise	Pinal.	5,436	7	55.8	—	86	13	21	27	52	0.00	—	0.00	0	0	17	8	nw.	J. C. Hancock.	
Parker	Yuma.	345	17	67.0	- 4.4	100	12†	32	6	60	0.00	- 0.24	0.00	0	2	27	3	se.	M. A. Israel, M. D.	
Payson	Gila.	5,550	5	54.4	—	84	24†	22	24	62	0.32	—	0.30	0	2	15	6	sw.	Mart McDonald.	
Pearce (near)	Cochise.	4,400	1	62.2	—	89	13	33	7	43	T.	—	T.	0	0	24	3	w.	Clarence H. Wilson.	
Phoenix	Maricopa.	1,108	19	69.6	- 0.6	96	12	44	7	39	0.01	- 0.34	0.01	0	1	20	8	s.	U. S. Weather Bureau.	
Phoenix (1)	do.	1,093	23	68.9	0.0	99	12	37	7	53	0.13	- 0.34	0.12	0	1	25	5	sw.	David Aeppli.	
Phoenix (4)	do.	1,189	5	68.2	—	95	12	43	8	47	0.06	—	0.06	0	1	23	3	sw.	Salt River Valley Nurseries.	
Final Ranch	Pinal.	4,520	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Ironton & Craig.	
Pinedale	Navajo.	6,500	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	E. Thomas, Jr.	
Pinto	Apache.	5,660	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Celia F. Henning.	
Prescott	Yavapai.	5,320	46	51.7	- 2.5	83	12	31	6	49	0.25	- 0.59	0.15	0	2	27	3	—	Dr. J. W. Flinn.	
Prescott Dry Farm	do.	5,008	1	56.0	—	80	24	31	6	42	0.78	—	0.65	0	2	21	10	s.	L. L. Bates.	
Quartzsite	Yuma.	800	6	69.0	—	96	13	37	7	48	0.15	—	0.05	0	1	27	4	nw.	W. E. Scott.	
Redrock	Pinal.	1,864	4	—	—	—	—	—	—	—	T.	—	T.	0	0	29	1	w.	Agent Southern Pacific Ry.	
Rice	Gila.	2,540	30	62.7†	- 1.6	93	13	35	7†	53b	0.60	—	0.60	0	1	15	16	0	Arthur Pritchard.	
Roosevelt	do.	2,175	9	65.6†	—	90	1	—	—	—	—	—	—	—	—	—	—	—	U. S. Reclamation Service.	
Sacaton	Pinal.	1,280	6	70.2	—	100	12	37	7	54	0.18	—	0.18	0	1	26	0	sw.	E. W. Hudson.	
St. Johns	Apache.	5,650	9	52.4	—	77	13†	25	28	44	0.87	—	0.75	0	2	26	0	sw.	Alexander Shreve.	
St. Michaels	do.	8,950	26	45.4	- 1.6	66	4	23	12	40	1.25	+ 0.41	0.75	0	2	27	2	sw.	Rev. Anselm Weber, O.F.M.	
Satome	Yuma.	1,875	6	66.9	—	95	12†	35	7	51	0.00	—	0.00	0	0	30	0	w.	August Nord.	
San Simon	Cochise.	3,009	27	66.2	+ 0.3	98	20	33	31	55	0.00	—	0.41	0	0	29	2	sw.	Agent Southern Pacific Ry.	
Sellman	Yavapai.	5,210	8	50.8	—	85	24	19	6	53	0.09	—	0.08	0	2	25	3	sw.	Librarian A. T. & S. F. Ry.	
Sentinel	Maricopa.	688	15	71.4	- 1.0	95	13	47	7†	42	0.00	- 0.16	0.00	0	0	30	0	1	Agent Southern Pacific Ry.	
Silverbell	Pima.	2,664	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Imperial Copper Co.	
Snowflake	Navajo.	5,644	6	49.0	—	75	17†	16	26	50	1.00	—	0.50	0	3	22	3	n.	William J. Flake.	
Springerville	Apache.	6,862	3	47.3	—	74	28	14	20	59	0.61	—	0.28	0	4	22	6	sw.	U. S. Forest Service.	
Supai	Cochino.	3,200	7	62.8	—	86	14	37	5	48*	0.12	—	0.10	0	2	27	1	3	Laura B. Symons.	
Tempe	Maricopa.	1,165	9	68.2	—	97	11	40	7	48	0.03	—	0.03	0	1	19	12	0	se.	
Thatcher	Graham.	2,800	10	63.9	+ 1.0	97	3	34	22†	58	0.36	- 0.39	0.36	0	1	18	13	0	F. H. Simmons.	
Thomas	Cochino.	5,200	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	J. H. Larson.	
Tombstone	Cochise.	4,550	18	65.3	+ 1.4	90	13	45	5†	36	0.30	- 0.20	0.28	0	2	23	5	sw.	L. H. Thomas.	
Truxton	Mohave.	3,997	3	58.6	—	89	20	37	5	48*	0.03	—	0.03	0	1	27	2	sw.	F. N. Wolcott.	
Tuba	Cochino.	4,500	13	54.6	+ 0.2	79	13†	31	6†	42	0.66	- 0.06	0.46	0	2	24	6	1	sw.	Truxton Canyon Ind. School.
Tucson	Pima.	2,390	33	66.9	- 2.4	94	14	40	28	45	0.22	- 0.35	0.22	0	1	23	5	3	Ira Bell.	
Tucson (1)	do.	2,380	5	64.4	—	95	13	38	7	48	0.18	—	0.14	0	2	22	4	5	University of Arizona.	
Tucson (4)	do.	2,520	4	66.0	—	94	13	38	7	48	0.18	—	0.14	0	2	27	2	5	Rev. James F. Record.	
Vall	Yavapai.	3,421	14	59.0	—	82	1	35	28†	43	0.60	+ 0.39	0.60	0	1	23	7	1	U. S. Coast & Geod. Survey.	
Walnut Grove	do.	3,649	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	J. O. Carter.	
Wickenburg	Maricopa.	2,072	15	64.6	0.0	88	19	34	8	49	0.25	- 0.11	0.25	0	1	28	0	3	Agent S. F. P. & P. Ry.	
Wilcox	Cochise.	4,164	32	59.5	- 2.6	92	3	25	27	55	0.00	- 0.61	0.00	0	0	21	1	9	Agent Southern Pacific Ry.	
Williams	Cochino.	6,750	13	50.3	- 2.5	76	30	14	6	49	0.37	- 1.05	0.37	0	1	27	2	2	E. J. Nordyke.	
Winslow	Navajo.	4,855	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Winslow High School.	
Yuma	Yuma.	141	33	72.6	- 0.8	99	12	45	8	45	T.	- 0.19	T.	0	0	30	1	0	U. S. Weather Bureau.	
Yuma (1)	do.	150	6	66.7	—	96	12	34	7	52	T.	—	T.	0	0	29	0	2	C. J. Wood.	
Nevada.																				
Caliente	Lincoln.	4,407	3	45.9	—	72	12	22	7	44	0.00	—	0.00	0	0	30	1	0	ne.	Salt Lake Route.
Las Vegas	Clark.	2,033	11	63.4	+ 4.2	89	13†	35	7	49	T.	- 0.25	T.	0	0	28	3	2	s.	C. P. Squires.
Logan	do.	1,355	6	64.9	—	91	12†	33	6	48	0.00	—	0.00	0	0	29	2	0	n.	Orin W. Jarvis.

*, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulbs; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1913. District No. 9, Colorado Valley.*

TABLE 2.—*Daily precipitation for October, 1913. District No. 9—Continued.*

TABLE 2.—*Daily precipitation for October, 1913. District No. 9—Continued.*

Stations.	Watershed.	Day of month.																													Total.					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Arizona—Contd.</i>																																				
McNeal.	White.																																T.	0.10		
Mariycopas.	Gila.																																	0.05		
Marinettes.	Agua Fria.																																	0.00		
Moccasin.	Colorado.																																	0.64		
Mohawk.	Gila.																																	0.10		
Naco.	San Pedro.	T.																																0.14		
Natural Bridge.	Verde.																																	0.10		
Nutrioso.	Little Colo.																																	0.18		
Oracle.	San Pedro.																																	0.02		
Osborn.	do.																																	0.35		
Paradise.	Desert.																																	0.00		
Parker.	Colorado.																																	0.00		
Payson.	Verde.																																	0.32		
Pearce (near).	Desert.																																	T.	T.	
Phoenix.	Salt.																																	0.01		
Phoenix (1).	do.																																	0.12		
Phoenix (2).	do.																																	0.00		
Pinal Ranch II.	Gila.																																	0.06		
Pinedale.	Little Colo.																																	0.60		
Pinto.	do.																																	0.65		
Prescott.	Verde.																																	0.25		
Prescott Dry Farm.	do.																																	0.78		
Quartzsite.	Colorado.																																	0.05		
Redrock.	Santa Cruz.																																	T.		
Rice.	Gila.																																			
Roosevelt.	Salt.																																	0.60		
Sacaton.	Gila.																																	0.18		
St. Johns.	Little Colo.																																	0.87		
St. Michaels.	Gila.																																	1.25		
Salome.	Desert.																																	0.00		
San Simon.	Gila.																																	0.00		
Seligman.	Verde.																																	0.09		
Sentinel.	Gila.																																	0.00		
Silverbell.	Santa Cruz.																																			
Snowflake.	Little Colo.																																	T.	30	1.00
Springerville.	do.																																	0.61		
Supai.	Colorado.																																	0.12		
Tempe.	Salt.																																	0.03		
Thatcher.	Gila.																																	0.36		
Thomas.	Verde.																																	1.06		
Tombstone.	San Pedro.																																	0.30		
Truxton.	Desert.																																	0.03		
Tuba.	Little Colo.																																	0.66		
Tucson.	Santa Cruz.																																	0.22		
Tucson (1).	do.																																	0.20		
Tucson (2).	do.																																	0.18		
Vail.	Hassayampa																																	0.60		
Walnut Grove.	do.																																	0.20		
Wickenburg II.	do.																																	0.25		
Wilcox.	Desert.																																	0.00		
Williams.	Colorado.																																	0.37		
Winslow.	Little Colo.																																			
Yuma.	Colorado.																																			
Yuma (1).	do.																																			
<i>Nevada.</i>																																				
Caliente.	Colorado.																																	0.00		
Las Vegas.	do.																																	T.		
Logan.	do.																																	0.00		

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

II Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures for October, 1913. District No. 9, Colorado Valley.

Date.	Wyoming.				Colorado.							Utah.							New Mexico.											
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Hite.		Moab.		St. George.		Vernal.		Bloomfield.		Fort Bayard.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1			72		70	47	75	51	65	47	72	36	72	45	75	25	87	64	81	41	85	51	86	41	79	52	74	42		
2			75		61	45	69	50	57	40	70	32	75	29	79	28	77	55	64	52	76	45	83	38	61	43	73	52		
3			66		52	39	62	48	54	36	64	37	64	38	80	30	64	54	70	49	82	40	85	40	64	45	71	53		
4			44		56	37	70	43	58	39	56	44	55	40	71	32	75	53	75	42	83	41	80	30	67	43	67	40		
5			38		59	39	62	37	62	40	52	29	49	31	72	35	72	51	74	46	89	44	76	26	67	45	69	40		
6			40		49	28	53	32	59	25	42	22	41	24	71	32	63	37	66	28	69	26	78	28	59	34	65	41		
7			47		59	24	64	34	55	23	58	23	56	17	70	30	71	36	71	28	79	32	67	29	72	38				
8			59		63	27	66	40	60	13	63	32	62	24	71	31	75	42	75	33	78	28	81	31	71	34	73	41		
9			49		33	24	28	56	37	50	16	47	24	45	33	68	30	71	41	76	35	85	29	65	36	65	42			
10			40		26	53	26	54	33	54	19	41	24	38	25	62	35	64	39	57	27	70	48	80	26	52	29	68	43	
11			53		29	61	22	61	32	56	20	68	24	51	17	65	32	72	37	67	28	81	27	74	22	63	24	74	40	
12			69		36	70	30	68	39	59	17	69	24	69	20	61	30	73	40	73	30	88	30	74	27	76	31	77	45	
13			70		32	69	37	74	39	58	24	58	21	66	24	63	35	81	46	80	37	85	34	71	31	77	47	78	60	
14			50		32	68	32	74	42	65	28	63	30	62	28	60	32	81	50	79	37	85	37	75	37	77	43			
15			51		25	65	34	68	40	65	23	55	25	54	24	66	35	79	44	80	37	84	33	67	30	73	37	69	45	
16			50		20	62	29	65	35	60	20	56	18	55	19	61	31	73	46	70	34	75	28	63	38	67	32	70	40	
17			49		22	59	26	59	34	55	14	51	20	48	26	62	30	71	45	65	27	75	25	70	24	60	24	70	35	
18			49		27	57	26	60	34	45	15	47	22	40	27	60	35	74	43	66	26	77	30	59	22	63	26	70	37	
19			54		32	64	31	53	45	50	28	50	33	40	28	63	35	73	42	67	32	80	36	62	28	66	33	69	44	
20			60		35	62	30	66	35	61	19	63	26	51	29	66	31	77	43	71	31	82	35	57	28	66	27	69	36	
21			54		33	65	26	58	32	54	15	56	20	49	21	61	35	75	40	67	30	80	31	72	33	68	32	71	36	
22			57		24	65	37	65	37	53	19	56	29	51	32	62	35	77	44	70	30	83	35	68	27	68	33	70	47	
23			65		31	66	31	69	37	56	17	65	23	59	24	66	33	79	41	70	31	83	33	54	20	71	29	74	44	
24			65		26	68	32	70	39	48	16	66	25	64	23	69	36	81	41	74	32	85	34	60	26	73	32	74	44	
25			40		34	66	30	62	33	50	20	50	24	43	19	71	38	75	43	70	34	78	33	63	22	70	31	75	43	
26			43		5	50	21	50	25	72	21	47	10	40	10	70	36	64	42	63	28	74	32	57	23	53	20	66	43	
27			51		15	61	19	57	28	65	7	45	21	37	17	66	39	68	39	64	25	76	28	57	24	58	18	67	25	
28			40		25	62	29	53	38	69	10	55	20	39	25	68	38	68	38	58	30	79	30	59	27	65	24	71	38	
29			55		13	63	23	53	58	28	65	13	65	25	52	11	70	35	68	39	67	24	74	31	50	22	65	21	66	29
30			40		25	62	32	64	37	59	9	53	13	54	20	87	32	73	39	69	29	78	32	52	26	68	37	67	40	
31			53		27	58	32	68	41	60	6	61	26	57	27	61	31	71	40	72	34	78	33	54	25	69	35	60	44	
Mns.			53.3		26.04	61.2	30.6	63.2	37.1	58.1	21.3	56.9	25.2	52.9	24.7	67.0	33.1	73.5	43.7	70.0	33.5	78.6	34.4	68.4	28.2	66.6	32.9	70.4	41.5	

Arizona.

Date.	Arizona.												Logan, Nev.											
	Douglas.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		Tucson.		Yuma.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	87	53	64	28	77	44	68	29	44	38	87	58	69	32	65	38	86	53	90	54	87	70		
2	86	53	54	42	75	47	66	38	40	38	87	62	68	39	63	46	87	60	90	59	88	54		
3	81	56	54	36	69	38	67	28	62	40	82	59	67	42	54	42	83	55	89	60	85	54		
4	83	47	57	35	71	38	65	26	68	40	87	57	67	42	66	41	86	53	90	59	87	52		
5	80	46	54	35	72	35	64	24	62	38	80	57	63	46	61	46	83	58	80	56	80	53		
6	81	47	52	20	68	32	64	28	66	32	77	46	62	21	58	30	79	45	82	46	74	33		
7	86	40	60	21	75	33	64	28	68	40	83	44	66	27	55	25	86	41	86	45	79	35		
8	84	43	60	24	76	31	62	30	69	40	83	47	70	26	53	27	87	45	90	45	83	47		
9	79	53	56	32	70	38	64	30	63	36	82	54	65	31	54	33	82	52	88	49	81	51		
10	81	52	54	26	71	31	64	32	64	42	82	55	65	32	55	33	81	50	88	52	74	47		
11	91	44	58	23	80	36	60	31	96	44	90	51	72	27	56	25	78	46	91	63	85	48		
12	94	56	70	28	71	47	62	31	100	44	96	53	73	34	63	23	92	59	99	55	88	54		
13	95	53	68																					